

Listing of the Claims

This listing of claims will replace all prior versions, and listings, of claims in this application.

Claim 1 (currently amended): A method of surveying drill holes comprising the steps of:

drilling a borehole with a drill string formed by a plurality of drill rods having a drill bit located at a cutting end of the drill string and being driven at least by percussive forces, wherein an inertial survey package is disposed within the drill string at the cutting end and advances with the drill string into the borehole while the drill string is operational to drill the borehole as part of a hole drilling operation, and wherein the survey tool is maintained in a sleeping mode while drilling is undertaken;

activating the survey tool once drilling is completed;

withdrawing the drill string from the borehole;

determining when the drill string is halted during the withdrawing of the drill string from the borehole; and

taking position readings from the survey package as withdrawal of the drill string is temporarily halted to remove each drill rod from the drill string in response to determining that the drill string is halted during the withdrawal of the drill string from the borehole.

Claim 2 (canceled).

Claim 3 (previously presented): A method as claimed claim in 2, wherein the survey tool is configured to sense the cessation of drilling to activate the survey tool once drilling is completed.

Claim 4 (canceled).

Claim 5 (currently amended): ~~An apparatus for~~ A method of surveying drill holes using a method incorporating comprising the steps of:

feeding a survey tool disposed within a drill string formed by a plurality of drill rods into a borehole while the drill string is operational to drill the borehole as part of the hole

drilling operation, wherein the drill string is driven at least by percussive forces, and wherein the survey tool is maintained in a sleeping mode while drilling is undertaken;

activating the survey tool once drilling is completed;

withdrawing the drill string from the borehole;

determining when the drill string is halted during the withdrawing of the drill string from the borehole; and

taking position readings from the survey tool as withdrawal of the drill string is temporarily halted to remove each drill rod from the drill string in response to determining that the drill string is halted during the withdrawal of the drill string from the borehole, wherein the survey tool includes an inertial survey package and a power source.

Claim 6 (currently amended):~~An apparatus~~ A method as claimed in claim 5, wherein the survey tool also includes a data logger.

Claim 7 (currently amended):~~An apparatus~~ A method as claimed in claim 5, wherein the survey tool is mounted to the drill string by a damping system arranged to isolate the survey tool from vibrations and acceleration induced in the drill string.

Claim 8 (currently amended):~~An apparatus~~ A method as claimed in claim 5, wherein the inertial survey package is selected from the group comprising commercially known inertial survey packages, for superior characteristics of resistance to vibration and impact from a group comprising commercially known inertial survey packages.

Claim 9 (currently amended):~~An apparatus~~ A method as claimed in claim 8, wherein the inertial survey package is selected for superior resistance to vibration and impact when in a sleeping mode.